



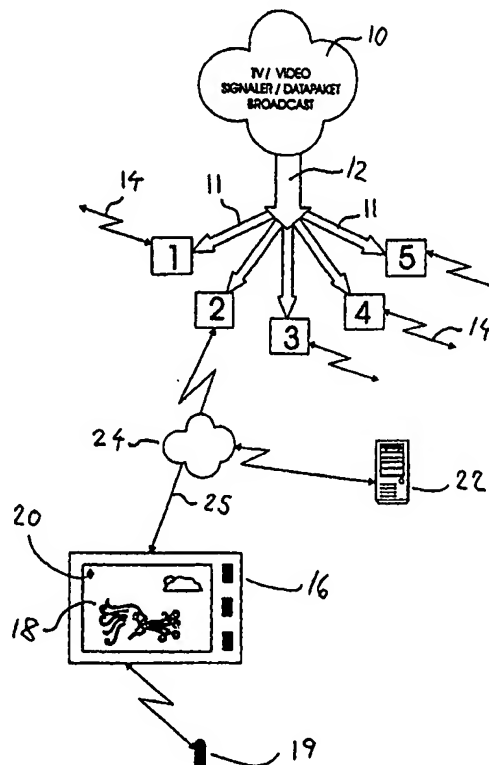
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/SE99/02431 (22) International Filing Date: 20 December 1999 (20.12.99) (30) Priority Data: 9804414-2                      18 December 1998 (18.12.98)      SE (71)(72) Applicants and Inventors: <b>TEGENFALK, Stefan</b> [SE/SE]; Wahlbergsgatan 12, S-121 38 Johanneshov (SE). <b>LINDGREN, Bo</b> [SE/SE]; Björknäsvägen 12, S-151 37 Södertälje (SE). (74) Agents: <b>UDO, Hinz et al.; AB Stockholms Patentbyrå, Zacco</b> & Bruhn, Box 23101, S-104 35 Stockholm (SE).	(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> <i>In English translation (filed in Swedish).</i>	

(54) Title: METHOD AND ARRANGEMENT FOR DISTRIBUTING INFORMATION TO DIFFERENT TARGETED GROUPS OVER MEDIA CHANNELS

## (57) Abstract

The invention relates to method and an arrangement for distribution of a varied selection of signal sequences in media channels (11, 12) in connection with broadcasting of a fixed selection (12) of signal sequences over the channels (11). It is directed at recipient groups (1, 2, 3, 4, 5) that have been divided up according to different selections of varied signal sequences. A centre (10) broadcasts one and the same fixed selection of signal sequences in different versions according to the varied selections of signal sequences over channels (11, 12) in a network with two-way communication (25). Each of the said versions is intended to be received by a specific recipient group (2). Individual persons within the respective recipient groups are free to acknowledge (19) via the two-way communication (25) over a channel that they have viewed or noted a signal sequence. The acknowledgements (19) are stored in a network (20) and form the basis of bonuses directed to individual persons.



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Method and arrangement for distributing information to different targeted groups over media channels.

### Technical field

The present invention relates to method and an arrangement for distributing information in media channels in connection with the electromagnetic broadcasting of other fixed selections over the said channels that is directed to recipient groups who have different  
5 information profiles.

### Prior art

Interactive media, especially in connection with the use of PCs (personal computers) and similar as well as with television broadcasts, is becoming increasingly more common today. One of the reasons for this is that new carriers for supplying broadcasts have arisen or enjoyed an  
10 increase in use, and that these have a much higher capacity than older, more simple carriers such as copper cable carriers, and older wireless carriers. Examples of carriers that are either new or now used more frequently are networks for cable TV such as fibre networks, radio networks, satellite networks, WAN, LAN, Internet, xDSL, etc.

It is not only the carriers of electronic information transfer that are based on new  
15 technology. The methods for how signals are modulated and how different channels share the times for broadcasting over the carrier to offer the best possible capacity for broadcasting of as many channels as possible over one and the same carrier are also based on new technology.

The possibility thus opens up for subscribers respectively viewers of the media selection on offer today to actively participate, via, for example, the image on the screen and  
20 two-way communication, in the programme selection, for example, through TV-shopping, "TV Pay-on-Demand", competitions, etc.

One problem for the subscriber or viewer is that they are subject to a supply of information such as advertising that is added to the fixed selection. For example, most young men are probably not interested in advertising for nappies/diapers as such, except, possibly, for  
25 the entertainment value.

There thus exists a need and a problem to solve in a technical manner how information can be selected for different groups of individuals such as single persons, families with children, different professions, different ethnic groups, etc., and how these groups can screen themselves from information that they do not desire.

30 In addition, there is a consequent need for suppliers of media to be able to reach the right target group and a need to gather a statistical basis for, for example, an advertising campaign.

### Summary of the invention

The present invention intends to provide a solution to the problems that are associated with selecting information for specific target groups via, for example, television, computers connected to networks, etc., through interactive communication over networks. The  
5 invention also provides solutions to gather statistics for suppliers of information.

In addition, the invention states how subscribers and viewers can be offered incentives for viewing specific information directed at just them.

To solve the problems according to that above and to fulfil the aims of the invention, a method is stated for distribution of a varied selection of signal sequences in media  
10 channels in connection with electromagnetic broadcasting (electromagnetic broadcasting refers to applicable parts of the electromagnetic spectrum such as radio waves, microwaves, light in applicable forms as well as even electromagnetic fields in cables) of a fixed selection of signal sequences over the said channels that is directed at recipient groups that have been segmented according to different supplies of the said varied signal sequences. A broadcasting centre  
15 transmits one and the same fixed selection of signal sequences in different versions according to the varied selection of signal sequences over channels in a network with two-way communication. Each one of the said versions is intended to be received by a specific recipient group, whereby individual persons in the respective recipient groups are free to acknowledge via two-way communication over a channel that they have viewed or noted a signal sequence. The  
20 acknowledgements are stored in the network and form the basis for bonuses for at least one individual.

In one embodiment, the acknowledgement is achieved through a TCP/IP address or similar network address to the respective recipient group, which identifies individual groups for registration, storage of acknowledgements in a network server.

25 In one embodiment, a symbol and/or an audio prompt is shown/heard on the screen of the recipient and/or via a loudspeaker when acknowledgement is possible.

The symbol and/or the audio prompt can be achieved at random within an information spot (information block). The symbol and/or audio prompt can also be achieved during a limited period of time within an information spot.

30 A receiver for the broadcast can be a TV set, computer, Set-Top-Box or similar receiver.

In addition, the present invention includes an arrangement for distributing information in media channels in connection with the electromagnetic broadcasting of other fixed selections over the said channels that is directed to recipient groups who have different information profiles.

5 The arrangement further includes:

broadcasting centre for broadcasting information that transmits one and the same fixed channel selection in different sessions/versions over a channel in a network with two-way communication;

handling information means for group-specific information storage and broadcasting  
10 of the said sessions where each session includes information spots directed at respective recipient groups;

acknowledgement means with which single individuals within a respective recipient group are free to acknowledge over the channel that they have viewed or noted an information spot;

15 storage means in the network where the said acknowledgements are stored and form the basis of the conditions that the individual has obtained in a subscription for the said fixed channel selection; and

analysis means for analysing the said conditions and statistics associated with acknowledgements.

20 One embodiment includes that the acknowledgement is achieved through a TCP/IP address or similar network address to the respective recipient group that identifies individual groups for registration, storage of acknowledgements in the said storage means.

One embodiment includes that a graphical means and/or audio prompting means achieves a symbol and/or audio information that is shown on a monitor screen of a recipient or is  
25 respectively heard via a speaker when acknowledgement is possible.

A further embodiment has a random-generation means that causes the symbol and/or audio prompt to appear at random during an information spot.

In one embodiment, a time-generating means determines how long the symbol and/or audio prompt is to appear within an information spot.

30 A receiver for a broadcast can be a TV set, computer, Set-Top-Box or similar receiver that has the possibility of two-way communication.

**Brief description of the drawing**

The continuing description refers to the attached drawings to give a better understanding of the different embodiments of the present invention, whereby:

Fig. 1 illustrates schematically an arrangement according to the present invention; and

5 Fig. 2 illustrates how the acknowledgement of an advertising block is achieved in one embodiment of the present invention.

#### **Detailed description of preferred embodiments**

The following describes how the present invention achieves a method and an arrangement for distributing advertising blocks over a TV network, whereby a TV viewer  
10 (subscriber) can interact with the distributor of the advertising block, although the invention is in no way limited to such an application, rather that the application constitutes only one preference within the scope of the wording of the attached claims with the aim of clarifying the invention for a person skilled in the art.

When a TV channel broadcasts programmes from a studio, it often achieves this  
15 with a broadcast of D1 quality (studio quality). Let us assume that a TV channel transmits a programme selection via a fibre pair. A receiver (cable TV centre) receives the selection and distributes the channel on the net for cable TV or LAN, etc. The flow of data that is distributed includes, among other things, advertising blocks ("spots") in addition to the fixed selection and that are normally stored on hard disks or tapes at the TV channel, and that start when a  
20 programme is interrupted for a commercial break.

As two-way communication via LAN and / or networks for cable TV is possible, a recipient (viewer, subscriber) of TV channels or packages of data can thus also return information to a centre (TV station, station for cable TV, etc.) via a personal computer, TV set, Set-top-box, etc., so that it is possible to register these packages of data and create log files.

25 In the continuing description, the term channel respectively signal sequence can be designated with the same reference number in Fig. 1. Signal sequences constitute the contents in a channel and are somewhat abstract to describe in a schematic figure.

Refer to Fig. 1. When TV channel company 10 broadcasts from a studio via a fibre pair that makes possible broadcasting via a variety of channels 11, one and the same programme  
30 12 (common channel selection) can be shown in, for example, five different sessions/versions in parallel, one session/version per profile group 1-5, which allows different advertising blocks for different subscribers to be added to each of the sessions. It is possible to achieve profiles of the

subscribers so that the right advertising block reaches the right subscriber or group of subscribers who subscribe to the same information profile.

The profile/group-specific information can, for example, be stored on a hard disc, CD, etc. for spots of advertising for each profile group, who are designated 1-5 in the figure.

- 5 The radio signal marks 14 in Fig. 1 symbolise the broadcasting of group-related information. The figure specifically shows a TV receiver 16 receiving an advertising/information spot, in this case from profile group 2.

When an advertising/information spot reaches the intended profile group (subscriber) 1-5, a subscriber can acknowledge 19 via two-way communication over the network, in this case via a remote control, an advertising message 18, for example, when a small icon 20  
10 flashes on the TV set 16. The acknowledgement 19 is registered at a centre 22, here a server, over a telecommunication/data network 24 in log files that are distributed to the TV channel company 10 or the advertisers who place the advertising/information who can then see how many viewed or noted their placement.

- 15 In return for the reply that the subscriber belonging to a profile group gives, the subscriber can receive a bonus in the form of, for example, a limited-time free subscription to the channel selection.

For every acknowledgement press 19 made, a number of points can, for example, be obtained, whereby a lower cable TV fee or similar can be achieved when a total sum of points  
20 has been reached. To minimise misuse, the time between that when the advertising message is transmitted and the time when the subscriber presses 19 can be matched, for example.

Every receiver includes a modem or similar, i.e. a return channel via which a viewer/listener can communicate and interact with a TV company or other supplier of media.

Fig. 2 describes the acknowledgement process in more detail in schematic form.

- 25 This shows an advertising spot 30 of a total of 110 seconds consisting of five advertising and/or information features. The features are in each case 8, 35, 63, 86 respectively 99 seconds, whereby the brackets in Fig. 2, after the length of time for the features (18), state the duration of time within the feature, here the icon, that is active for acknowledgement 19 (alert time). The time for the start of the alert time preferably varies randomly within a feature 18. In this way, a  
30 more correct measure of the interest of the subscriber for certain features is obtained.

To perform the procedure according to that above, the present invention includes an arrangement for distributing information in media channels 11 in connection with electromagnetic

broadcasting 14 of other fixed selections 12 over the said channels that is directed at recipient groups 1, 2, 3, 4, 5 with different information profiles.

The arrangement further includes:

5 broadcast centre 10 for broadcasting information that broadcasts one and the same fixed channel selection 12 in different sessions/versions over channels 11 in a network 24 with two-way communication 25;

gathering information means for group-specific information storage and broadcasting of said sessions, which each include information spots 18 directed at respective recipient group 2;

10 acknowledgement means 19 with which individual persons within the respective recipient groups are free to acknowledge over the channel 25 that they have viewed or noted an information spot 18;

storage means 22 in the network 24 where the said acknowledgements 19 are stored and form the basis of the conditions that the individual has obtained in a subscription for the said  
15 fixed channel selection 12; and

analysis means for analysing the said conditions and statistics associated with acknowledgement.

In one embodiment, it includes that the acknowledgement is achieved through a TCP/IP address or similar network address to the respective recipient group 1, 2, 3, 4, 5 that  
20 identifies individual groups for registration 2, storage of acknowledgements 19 in the said means of storage 22.

One embodiment includes that a graphical means and/or audio prompting means achieves a symbol 20 and/or audio information that is shown on a monitor screen of a recipient or is respectively heard via a speaker when acknowledgement 19 is possible.

25 A further embodiment has a random-generation means that causes the symbol and/or audio prompt to appear at random during an information spot 32.

In one embodiment, a time-generating means determines how long the symbol 20 and/or audio prompt is to appear within an information spot.

A receiver for broadcast can comprise a TV set 16, computer, Set-Top-Box or  
30 similar receiver that has the possibility of two-way communication 25.

It is understood that the present invention includes that icon 20 or other marking with or without sound and/or image can be achieved with a free choice of design. The same



applies regarding the type of person responsible for the selection, e.g. TV company, video company, distributor of data packages, other broadcast. It also applies regarding the receiver 16, which can be a TV, PC or other suitable receiver.

5       The present invention has been described with preferred embodiments but is not necessarily limited to these, but rather it is the wording of the enclosed claims that defines the invention for a person skilled in the art of the technology.

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### Claims

1. Method for distribution of a varied selection of signal sequences (11) in media channels in connection with electromagnetic broadcasting of a fixed selection of signal sequences (12) over the said channels directed at recipient groups (1, 2, 3, 4, 5) that have been divided up according to different selections of said signal sequences (11) c h a r a c t e r i s e d in that a centre (10) for broadcasting information broadcasts one and the same fixed selection of signal sequences (12) in different versions according to the varied selections of signal sequences (11) over channels in a network (24) with two-way communication (25), whereby each one of the said versions is intended to be received by a specific recipient group (2), whereby individual persons within the respective recipient group (2) are free to acknowledge (19) via the two-way communication (25) over a channel that they have viewed or noted a signal sequence (11) and whereby the said acknowledgements (19) are stored (24) in a network (24) and form the basis of bonuses for at least one individual.

2. Method according to claim 1 c h a r a c t e r i s e d in that acknowledgement (19) is achieved through a TCP/IP address or similar network address to the respective recipient group (1, 2, 3, 4, 5), which identifies individual groups for (2) registration, storage of acknowledgements (19) in a network server (22).

3. Method according to claims 1 and 2 c h a r a c t e r i s e d in that a symbol (20) and/or an audio prompt is shown/heard on the monitor screen of the recipient (16) and/or via a loudspeaker when acknowledgement (19) is possible.

4. Method according to claim 3 c h a r a c t e r i s e d in that the symbol (20) and/or audio prompt is achieved at random within an information spot (18).

5. Method according to claims 3 and 4 c h a r a c t e r i s e d in that the symbol (20) and/or audio prompt is achieved during a limited period of time within an information spot (18).

6. Method according to claims 1-5 c h a r a c t e r i s e d in that the receiver for said broadcast is a TV set (16), computer, Set-Top-Box or similar receiver.

7. Arrangement for distribution of information in media channels in connection with electromagnetic broadcasting of other fixed selections over the said channels directed at recipient groups that have different information profiles, c h a r a c t e r i s e d in that it includes:

a broadcasting centre (10) for broadcasting information that broadcasts one and the same fixed channel selection in different sessions/versions over a channel in a network (24) with two-way communication (25);

gathering information means for group-specific information storage and broadcasting (14) of said sessions where each session includes information spots (18) directed at respective recipient groups (2);

acknowledgement means (19) with which individual persons within respective  
5 recipient groups are free to acknowledge over the channel that they have viewed or noted an information spot (18);

storage means (22) in the network where the said acknowledgements are stored and form the basis of the conditions that the individual has obtained in a subscription for said fixed channel selection; and

10 analysis means for analysing said conditions and statistics associated with acknowledgement.

8. Arrangement according to claim 7 c h a r a c t e r i s e d in that it includes that the acknowledgement is achieved through a TCP/IP address or similar network address to the respective recipient group that identifies individual groups (2) for registration, storage of  
15 acknowledgements in said means of storage (22).

9. Arrangement according to claims 7 and 8 c h a r a c t e r i s e d in that a graphical means and/or audio prompting means achieves a symbol (20) and/or audio information that is shown on a monitor screen (16) of a recipient or is respectively heard via a speaker when acknowledgement is possible.

20 10. Arrangement according to claim 9 c h a r a c t e r i s e d in that it has a random-generation means that causes the symbol and/or audio prompt to appear at random during an information spot (18).

11. Arrangement according to claims 9 and 10 c h a r a c t e r i s e d in that a time-generating means determines how long the symbol (20) and/or audio prompt is to appear within  
25 an information spot (18).

12. Arrangement according to claims 7-11 c h a r a c t e r i s e d in that a receiver for said broadcast can comprise a TV set (16), computer, Set-Top-Box or similar receiver that has the possibility of two-way communication.

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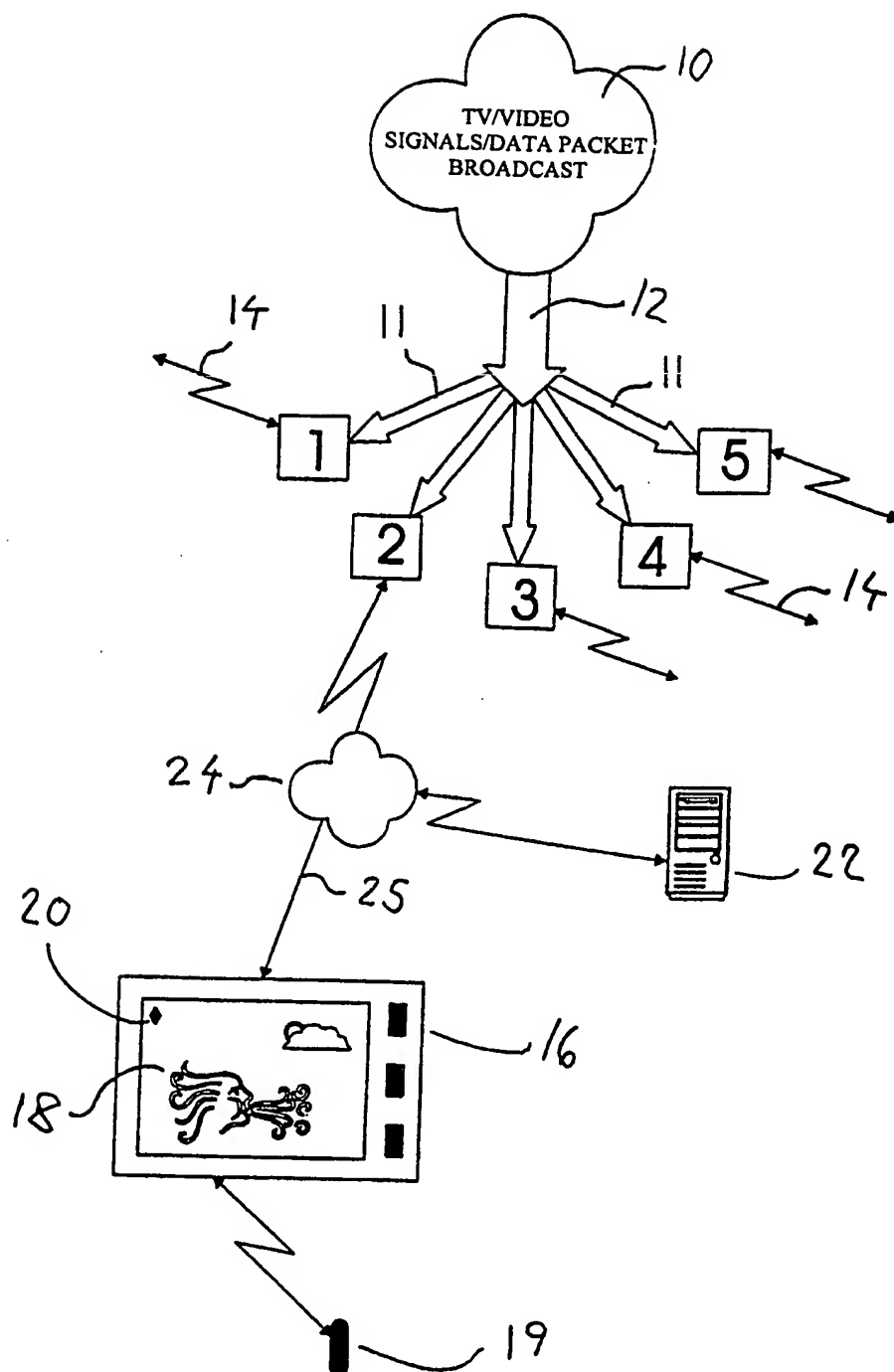


Fig. 1

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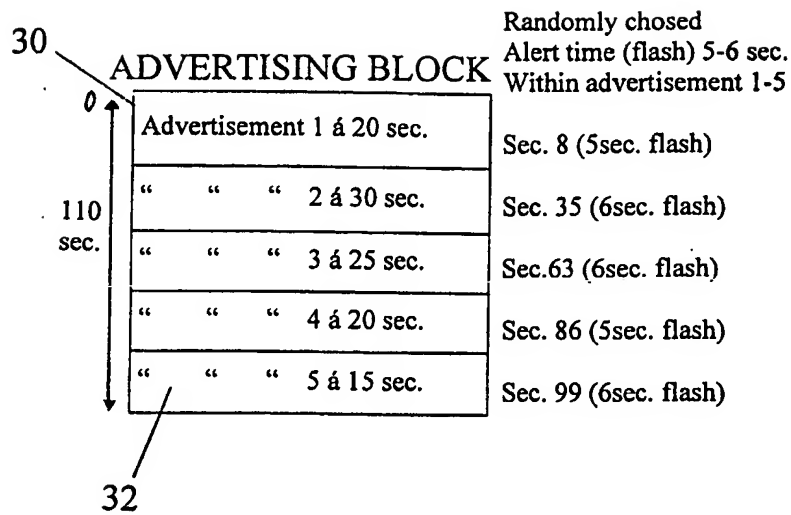


Fig. 2

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 99/02431

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04N 7/173, H04N 7/088

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0424648 A2 (GENERAL INSTRUMENT CORPORATION), 2 May 1991 (02.05.91), column 1, line 41 - column 4, line 55; column 6, line 34 - line 44; column 10, line 58 - column 11, line 3	1,2,7,8
Y	--	3-6,9-12
Y	US 5249044 A (HENRY VON KOHORN), 28 Sept 1993 (28.09.93), column 1, line 38 - column 2, line 31; column 7, line 45 - line 53; column 9, line 17 - line 29	3-6,9-12
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☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

11 May 2000

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

02/12/99

International application No.

PCT/SE 99/02431

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0424648 A2	02/05/91	SE 0424648 T3 CA 2024868 A DE 69027276 D,T DK 424648 T HK 1008412 A US 5155591 A	24/04/91 23/01/97 21/10/96 00/00/00 13/10/92
US 5249044 A	28/09/93	AU 2011192 A WO 9322874 A	29/11/93 11/11/93